

THE SONG OF THE SEA.

Thus the sea murmurs by the lonely strand,
And with the wailing of the wind is blown
This message of his immemorial moan
To all sad hearts that, hearing, understand!

Lo! I have watched the little lives of men;
Trouble they have, and bitter pain,
My waves accept them, and they lie quite still
Lulled by my murmuring, not to wake again.

Only I may not reach this boon of rest,
Who still about the desolate shores must cry
Under a gray, inexorable sky—
And know myself eternally unblest.

For me the years are empty. * * * Ah,
Poor men,
Have ye not strength to bear your lot of life?
And take small joys for guerdon of the strife?
For ye shall sleep, and shall not wake again.

There is no sorrow which the gods may send
That shall not be forgotten, and no pain
That shall not be sweetened rest, when rest ye gain
Ah, hush! most happy, who foresee an end.

THE BETRAYAL.

"And what do you say your numbers are?"

"Twenty-two, Excellency, myself included; but I—"

"No need to say anything further at present; it is for you to prove yourself worthy of our confidence and the czar's clemency."

"I assure you we had no political aim in view."

"I cannot listen to that. Have you made out the list you promised an hour ago?"

"It is here, Excellency."

The chief of the secret police took the paper handed to him, and silently compared it with one on his desk.

"Dostoevsky," he read, and looked up inquiringly, "is he one of you?"

"One of the society, but it was only to read Fourier and Proudhon we met."

"I cannot hear you, I have told you already. Be silent, and answer my questions."

Then he again scrutinized the list and muttered to himself, "Bardin, Loubanoff, Sobotkin—I was not aware of these last. You have done well, Radovitch, and you will find that the czar's government is not unkind of those who serve it well. Your recent action will atone for your past errors, and merit reward besides."

"Might I venture to suggest one thing to your Excellency?"

"Speak out, man; what frightens you now? I have told you that you have nothing to fear, and I can make my word observed."

"That I know well, and yet, and yet—"

"Well?"

"My life will not be worth a day's purchase if it is known that it is I who have furnished this information."

"You should have thought of that before joining their society. I see you have something to suggest. What is it?"

"That when the seizure by the police takes place, no distinction be made between me and the others."

"Of course you will be apprehended with them."

"And tried?"

"Yes, if you wish it, and condemned, too, for that matter. Anything further?"

"And pardoned along with the less guilty of the others, so as to avoid all suspicion?"

"I quite understand you. Rest assured you will have no reason for fear in that respect."

"I thank you, Excellency. Any further orders?"

"None; you may go."

The chief of police smiled to himself as the spy took his departure.

"And so you want to be treated like your fellow conspirators, that you may not be found out by such as escape us. So be it; you will have all you have bargained for, my man."

That very evening the police raid took place. Taken as they were by surprise, and unconscious of any treachery on the part of one of their number, the little coterie of students, artists, and young doctors found themselves bagged without a single exception. They indignantly denied the charge of conspiring against the government. Their discussions were social, not political, they asserted. But Gen. Garashin's myrmidons merely shrugged their shoulders, deprecatingly, perhaps incredulously. They had heard that sort of thing before, and had meant Siberia for many, if not a more summary fate. Among the twenty-two was Radovitch, who was also among the loudest in protesting innocence.

In a month the trial took place. Radovitch was not to give evidence, but took his place among the accused, and, like his companions, had to plead guilty or not guilty to the charge of conspiring to subvert the government. For many weeks the trial dragged its slow length along, for though few witnesses were, or could be, called beyond the police who effected the arrests, there were hundreds of documents, many of them immature essays, and most of purely academic interest, to be read, which, in a way that only one of the prisoners understood, had come into the hands of the prosecution, as well as brief minutes of their proceedings, obtained in the same way.

At length the whole twenty-two were adjudged guilty. Twelve were sentenced to Siberia, but not to the mines, as the clemency of the czar provided. It was with a thrill akin to horror that Radovitch heard himself sentenced to death, along with the other nine, though conscious that it only formed part of the arrangement that he himself had suggested to Gen. Garashin.

"Sentence to Siberia would have served the purpose equally well," he muttered to himself, and turning to

look at his companions, he found himself wondering if his own fate was as deathly pale as each of theirs. "To be shot on the glacis of the fortress at sunrise to-morrow morning," he kept repeating to himself, though assuring himself that the words could have no reference to him, for the czar must keep truth even with traitors, or none would be found to serve him in future. Dostoevsky and the others calmly accepted their fate, after a hurried farewell to their more fortunate fellows, were conducted to their cells for the last time.

Some of the prisoners slept soundly, as though entirely unconcerned in the grim tragedy to be enacted on the morrow. Not so Radovitch. From side to side of his narrow cell, like some engaged animal, he paced; listening the while to the footstep of the messenger that was to recall him to freedom and to the joys of life. The long night passed, all too quickly for him, for whom the messenger seemed unaccountably delayed. He had seen General Garashin in court from day to day, and once a glance of intelligence, he persuaded himself had passed between them. Valiantly the two warders, whose duty it was to watch him, sought to induce him to take rest.

"He may come at any moment," he kept saying to himself, "and I had better keep awake in case of any misunderstanding."

His throat was parched and his tongue clove to the roof of his mouth; but he refused every offer of water or wine, overcome as he was with the terrible anxiety of impending doom, an anxiety rendered all the greater by the conviction that such doom was not intended for him.

At last a faint grayness began to manifest itself through the close bars of his cell. It was the light, the herald of a new day, the last for the condemned men. And now Radovitch began to explain, in husky tones, that his conviction was all a blunder. The two men looked intelligently at each other, and pityingly upon the wretched prisoner, but said not a word.

In a few minutes all the ten were assembled in the courtyard of the prison, nine of them calm and collected for the bitterness of death was already past; one a prey to mortal fear and sickening terror, and evidencing it all too plainly in his trembling limbs and livid countenance. In the hurried good-byes they exchanged with each other, Radovitch came in for more than his share of attention.

"Come, Dimitri," said one, "we all owe Nature a debt; as well pay it now as later."

"Cheer up, comrades," whispered another; "it makes these hirings rejoice to see you afraid."

"It's all a mistake," mumbled the wretched man. "Where is General Garashin?"

"He is never present at executions," replied the soldier he addressed. "He issued his final orders last night."

And then a melancholy procession began to move towards the glacis of the fortress prison. A priest led the way, holding aloft a large cross before the eyes of the doomed men, who followed in single file, their ordinary dress covered with a long robe of white linen, and at once a covering for the living and a shroud for the dead. The morning sun had not yet risen as the procession wended its way slowly to the place of execution—their life's span narrowed to a few minutes, and narrowing with fearful rapidity at every step they took.

At last they reached the place appointed. Five stakes had been driven into the ground near the summit of the long, even slope of the rampart. To these they were bound in couples, facing the east, now kinling with the warm flush of the rising sun, whose coming was to be the signal for their death. Ranged in front of them, at a distance of fifteen yards, was a company of soldiers with loaded rifles, whose captain standing a little way apart held in his hand a white handkerchief, at whose fall sixty tongues of fire would leap forth and sixty bullets seek the hearts of the unhappy men.

There was still time for the last scene but one in the tragedy before the sun should rise. The cross was held before the lips of each man for a final kiss in turn. Then a dagger was broken over the heads by a soldier detailed from the thousands drawn up to witness the vengeance of the Czar. At that moment the sun seemed to bound into space, and every heart almost stopped.

But the officer has not let the signal handkerchief fall. Instead, the retreat is sounded on a score of bugles, and the troops march off the ground. The kneeling men were informed that the emperor had been graciously pleased to grant them their lives. They were unbound, and as if in a dream, trying to realize all that had happened, and to congratulate one another, ere yet the last couple had been reached. One of these had fallen forward on his face as far as his bonds permitted. It was Radovitch.

"He has fainted," said a soldier; "bring me some water sharp."

"No need to trouble," said the doctor, who had rapidly examined him, "he is dead. The fright has killed him."

It was too true. The chief of the secret police had carried out his promise only too literally. The spy had no longer any reason to fear his betrayed comrades' revenge.

SCIENTIFIC MATTERS.

SOME NEW DISCOVERIES AND IMPROVEMENTS.

Helps to the Photographer—Will We Ever Fly?—Preserving the Eyesight—The Caloric Value of Smoke—Cold Burns.

Two devices, which should be of great service to the photographer, have just made their appearance. Those who have had experience in photography know that the most picturesque scenes do not always make the best photographs, for the simple reason that without the aid of ortho-chromatic plates, stained screens and long exposures, it is difficult for the operator to secure the correct light and shade values of nature, upon which the artistic merit of the picture so much depends. The colors which are most brilliant to the naked eye are not the most active on the photographic plate; yellow and red appear too dark, violet and blue too light, and unless the operator has a knowledge of photographic light and shade, the picture is likely to be characterless and disappointing. Spectacles have been constructed for helping the photographer out of this difficulty. They are made of a specially prepared and colored glass, and it is claimed that they translate the view into a monochrome, so that on looking through them the photographer observes the scene with precisely the same light and shade as will subsequently be shown in his picture. Another invention is declared by a leading photographic journal to be "one of the most important advances in practical work for many years." This invention is styled an "ekronometer," and is intended for the timing of photographic developments. The production of the successful negative is dependent upon various influences, the temperature, strength of developer, etc. The length of time given for development has heretofore been decided by the appearance of the plate and individual experience. The new instrument is based on the discovery that almost every influence which lengthens or shortens the requisite time of development also lengthens or shortens in the same ratio the period of the first appearance of the half tones of the image. This affords an accurate basis for timing development, and the time of appearance is multiplied by a given factor to indicate the correct time of development. The ekronometer is a small black clock, around the dial of which a hand travels in ten minutes. Its circumference is provided with a simple slide rule for multiplying the "time of appearance" by the "multiplying factor." The front glass, which revolves, is provided with an indicator to set against the total time of development, the hand being always started at zero when the developer is poured on. It is claimed that this instrument enables the operator to secure much greater evenness and clearness in the printing quality of the negative.

Will We Ever Fly?

According to some recent discoveries many of the navigators of the air have been working upon altogether mistaken premises. They have failed to take into account the action of currents of air a given distance above the earth's surface. The first important point to decide in the construction of flying machines is the relation between power and weight. It is held by those who have given much time and thought to experiment in this line that fifty to one hundred pounds is the limit of weight that any machine built on recognized theories can lift from the ground. But this idea may be very far from right, especially in machines constructed so as to move with great rapidity. A water wagon might be constructed, provided it had instead of the usual tire, a series of hands or paddles that could be brought down with a sharp blow upon the surface of the water and as quickly raised. Before it could sink, the water must be displaced, but before this takes place the paddle is up in the air again and ready for another blow. So with flying. The aero-plane will gain power, and consequent speed just in proportion as it can use a body of air as a step before displacing it. The more forcible, quick and elastic the blow, the more power can be accumulated before the air gives way under the stroke. The blade of the aero-plane goes into position by cutting the air with its thin edge, then instantly takes a horizontal position and lifts by what may be called a slap upon the air. If the flying machine ever becomes a success it will undoubtedly be made upon these lines. There must be extreme strength and lightness of machinery, and extreme rapidity of motion in order to acquire lifting power. This must be obtained by aero-planes that move so quickly that they get their purchase before the air has time to move out of the way. Fine steel is the aerial navigator's metal, as it is, without doubt, stronger, weight for weight, than aluminum or any of its alloys.

Preserving the Eyesight.

Dr. J. Hobart Egbert says that a large proportion of the prevalent weakness and defectiveness of eyesight is caused by want of proper care in the management of children. Children should have, to begin with, unlimited air and sunlight. Many mothers are either lamentably ignorant or culpably careless as to what their children should eat, drink and nourish on. They should be allowed the amount of sugar should be reduced to a minimum, and candy should be entirely barred. Weak sight and other ocular difficulties are often the result of early straining of the eyes. Children's books should invariably be printed in large type. School rooms should have good light and fresh, wholesome air. The study of books and near objects should be of short duration and should be interspersed with blackboard or other object lessons, which may be viewed from a distance, and with outdoor exercise or play. The reading of printed music is a great strain on the eyesight, and should invariably be followed by allowing the eyes to rest on some distant object, and Dr. Egbert condemns the use of music stools without backs as conducive to mis-shapen bodies and weak backs in the young. Nothing rests the eyes and the head as well, for bad eyesight and over-tiring of the organs of vision are most fertile causes of headache and allied disorders—after a hard day's study or close attention to near objects, as a walk in the country, where the eyes may be directed upon distant objects and the beauty of the landscape may charm the mind. Dr. Egbert recommends frequent walks in the open, the mixing of manual labor with intellectual engagements, care with regard to diet, attention to bathing, and the avoidance of the use of the eyes for reading or study in a bad light, when lying on the back or in a moving train, as important factors in the preservation of the eyesight. All work, and especially that requiring the continued and entire attention of the visual sense, should be governed by one rule, and stop short of fatigue. A change of occupation, a ride or walk in the open air, a plunge in the river, and, above all, a good night's sleep, all help to rest the overtaxed eyes, and restore their strength and tone. Many people make a great mistake in postponing the use of spectacles. The eyes require help, no matter whether the person be twenty or forty years of age, glasses should be employed forthwith.

The Caloric Value of Smoke.

An engineering journal, in discussing various popular misconceptions of scientific phenomena, refers to the frequency with which it is stated that large amounts of valuable fuel are poured into the air in the form of smoke from the chimneys of factories and the funnels of steamers. Such statements are now declared to be almost entirely without foundation, and it is held, that no appreciable economy is likely to be effected by smoke-consuming devices and that manufacturers should demand before adopting them much more convincing and sounder reasons than those usually given. The analysis of a series of furnace gases made by a committee of the English Institution of Mechanical Engineers, showed absolutely no carbonic oxide in any of the eighteen samples taken from each funnel. The city analyst of Glasgow, Scotland, maintains, as the result of analysis, that in all ordinary coal the heating power of the whole of the hydrocarbons is only a small proportion of the total, and hence, even if the whole of these escaped combustion entirely, the loss would not be so serious as it is commonly stated to be. Even soot contains only about 60 per cent of combustible material, and samples collected from heavy smoke showed only 51.46 grains of soot per cubic foot of furnace gases. The soot consists largely of mineral or incombustible matter. Careful experiments show that the solid combustible matter of the smoke can only account for the very small percentage of 0.74 of the total heating power which can be obtained from the coal. The conclusion reached is that the real waste in smoke is very small indeed, and the popular belief in immense loss from this cause is simply a fallacy, and is decidedly not corroborated by experiment.

Cold Burns.

M. Pistet has had some singular experiences with cold-burns in the course of his experiments on liquefying gases. In one kind of burn the skin is reddened and turns blue next day, the area of the spot increasing, and the cure being delayed for five or six weeks. This class of burn is attended with painful itching, and the sufferer is apt to regard a wholesome heat-burn as a luxury by contrast. In an even more serious kind of burn, due to greater cold or longer contact with the cold body, the skin is detached, and the parts reached by the cold behave like foreign substances. Suppuration sets in, the sore is malignant, and a scar is produced. M. Pistet accidentally scalded his hand with fire at the same time as he burnt it with liquid air, and while the ordinary burn healed in ten or twelve days, the other was bad for six months. To try the effect of losing heat by simple radiation in cold air, M. Pistet plunged his bare arm into refrigerated air at a temperature of 105 degrees C. below zero, without touching the walls of the vessel. The result was a painful and indescribable sensation, having its seat in the central bone. The skin soon turned blue, and at the end of ten minutes a strong reaction, was experienced, accompanied by superficial inflammation of the skin. This reaction is an intensified form of the effect of handling snow for some time.

A Case of Transfusion.

The legal possibilities of transfusion were brought out in a recent suit in an English court. A man who was very ill, treated by transfusion of blood as a last resort. He recovered, and after a time his gardener, from whose veins the vital fluid was taken, fell ill. Some one suggested that his contribution to his employer might have caused his illness, whereupon he brought suit, claiming sixty thousand francs' damages. After a good deal of legal investigation experts were appointed to examine and report on the case. This took so long that the man died before the report was finished. The widow, however, continued the suit, even though the post-mortem examination demonstrated that death was caused by cancer of the stomach. The courts decided in favor of the defendant, on the ground that even though the man's vitality might have been impaired by the loss of blood, his voluntary offer for the benefit of another individual released the recipient from all financial liability that might be claimed on account of the transfusion.

Hard to Hear.

Mrs. De Style (fond of novels)—Did you do as I directed, and tell everybody who called that I was engaged?

Domestic—No one called, mum.

"What! Not one?"

"Not a soul!"

"Mercy! Such heartless neglect is outrageous!"—New York Weekly.

FARM AND GARDEN.

MATTERS OF INTEREST TO AGRICULTURALISTS.

Some Up to Date Hints About Cultivation of the Soil and Yields Thereof—Horticulture Viticulture and Floriculture.

Preparing for Winter.

After harvest it is well to turn one's thoughts toward the long, cold winter ahead and "figure" on what preparations will be necessary to carry the live stock comfortably through. The provision of an adequate supply of proper food is of first importance and calculations should at once be made as to the amount required. The home supply of such things as hay, fodder, corn and oats is usually ample, but other foods are necessary and by commencing early to think about such things it will often be possible to save many a dollar, before a rise in price takes place. Every owner of stock can afford to sell off a portion of his ear corn, and with the proceeds purchase bran, shorts, middlings and oil meal, but in many districts where grain is taken to the mill the "grist" is got in trade and usually is a better sample than the commercial stuffs. Oil meal is not yet commonly used on the average farm, but is becoming rapidly and rightly popular, for surely we can better afford to feed it at home than send the bulk of it abroad to be bought greedily at high prices by the men that feed steers against our cheap meat. In this country of the golden grain—maize or Indian corn—along with such ample supplies of prairie hay and corn fodder, there is surely a rich supply of carbonaceous foods, and our stock needs such supplies for the long fight against cold; but we do not feed a sufficient amount of nitrogenous food to finely finish prime beef, pork or mutton. Our foreign neighbors use our corn in large quantities, but the American food they prize most is the oil cake that comes from the linseed oil and cottonseed oil mills, and they pay prices that are really astonishing. The FARMERS' REVIEW would strongly advise its readers to substitute a portion of oil meal or ground cake in the usual ration for animals that are being finished for the Christmas markets, and such food need cost no more than the old ration, if the cost of the ration be properly figured, as but one part of the oil meal will be needed to seven parts of carbonaceous food, such as corn. When laying in a supply of such foods it is also well to take precautions against waste of good feeding material due to poor shelter for the stock; for one of the most serious leaks in farm economy is that in the barn that lets in drafts and so causes a waste of heat producing food. It should be understood that good ventilation—plenty of fresh air—never retards fattening when animals are tied up indoors, for such air is needed to supply all the other forces that unite in the assimilation of food and formation of flesh and fat; the hot non-oxygenized atmosphere of an overcrowded barn is also detrimental, as it causes animals to sweat, drink large quantities of water, and in other ways fail to thrive. See, then, that the stables are well ventilated, yet free from drafts, and depend upon it that they will be warm enough when full of cattle, and that too much warmth is decidedly detrimental. Another point to remember in preparing for winter is the water supply, which annually is a source of trouble upon thousands of farms. We need give little advice, but merely remind our readers how absurd it is to have to water hundreds of cattle from a common well and hand pump, or have the water pipes exposed so that they are constantly freezing up and bursting.

Pertinent Questions.

"Did you ever see a counterfeit bank note?"

"Yes."

"Why was it counterfeited?"

"Because the genuine note was worth counterfeiting."

"Did you ever see a scrap of brown paper counterfeited?"

"No."

"Why not?"

"Because it is not worth counterfeiting."

"Did you ever see counterfeit butter?"

"Yes."

"Why was it counterfeited?"

"Because the cow product was worth counterfeiting."

"Did you ever see butterine or oleomargarine counterfeited?"

"Why, no. How absurd."

"Did you ever see any one trying to palm off butter as butterine or oleomargarine?"

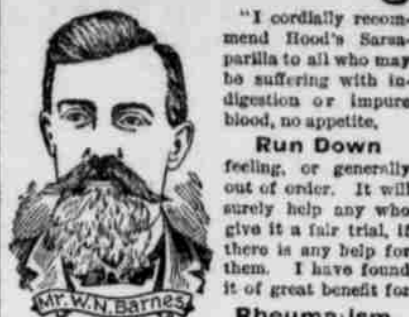
"Why, no."

"Of course not."—Ex.

FERTILIZER FOR APPLE TREES.

There is no better fertilizer for an orchard than unbleached wood ashes, for what will encourage a healthy growth of wood will help the fruit. And as the apple wood has in its ash 71 per cent of lime, 4.12 of phosphoric acid and 15 per cent of potash, these being all contained in wood ashes it follows that no better fertilizer can be procured. All the rest are supplied by the atmosphere, and if the trees are in vigorous condition the leaves will collect all they require from that source. The time to apply the ashes is as early in the spring as possible. If the ashes are not easily procured a substitute may be made of 200 pounds of superphosphate of lime and 100 pounds of sulphate of potash for each acre. This will be best applied broadcast, for the feeding roots of a tree are mostly under the smaller branches and near the surface.—Ex.

That Tired Feeling



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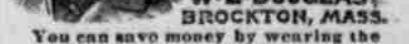
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